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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,777	07/07/2003	Jun Ozawa	285032005901	8016

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EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/614,777

Applicant(s)

OZAWA ET AL.

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 32-66 is/are pending in the application.
- 4a) Of the above claim(s) 43-46, 48, 49, 54-58 and 63-65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-42, 47, 50-53, 59-62 and 66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 32-66 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/856,411.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/7/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 32-53 and 59-66, drawn to a vacuum processing system having a load port.

Group II, claim(s) 54-58, drawn to a vacuum processing system.

2. The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Group II does not include a load port.

3. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

A: Figures 1-6

B: Figures 7-15

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

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Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

4. The claims are deemed to correspond to the species listed above in the following manner:

A: Claims 43-46, 48, 49, 63-65

B: Claims 34, 47, 53, 57

The following claim(s) are generic: 32, 33, 35-42, 50-52, 54-56, 58-62.

5. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Species A is directed to a processing system in which the transfer sections have distinct load lock and transfer chambers, whereas Species B has integral transfer sections.

6. During a telephone conversation with Meharn Arjomand on 11/29/04 a provisional election was made without traverse to prosecute the invention of Group I and Species B, claims 32-42, 47, 50-53, 59-62, and 66. Affirmation of this election must be made by applicant in replying to this Office action. Claims 43-46, 48, 49, 54-58, and 63-65 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
9. The status of the parent application as abandoned should be added to the related application section of the specification.
10. Reference number 6 on applicant's IDS has been crossed out as it appears to be completely unrelated to the instant application.
11. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
12. Claims 32-42, 47, 50-53, 59-62, and 66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 32, line 3, --the-- should be inserted before "cassette";

and lines 7, 11, and 14, there is no clear antecedent basis for "the object".

The above applies throughout the remaining claims as well.

In claim 34, there is no clear antecedent basis for "the transfer section". This also applies throughout the remaining claims.

In claim 35, "detachable attached" is unclear.

In claim 51, line 7, "form" should be --from--;

and line 8, "rotating" should be --rotation--.

In claim 62, line 6, "unites" should be --units--;

and last two lines, "in vertical with" is not understood.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 51 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakane et al (US 4,483,651).

Nakane et al show a vacuum processing system including load port 5, 5' in which plural cassette containers each holding a plurality of objects to be processed are arranged, common transfer chamber 10 having first transfer device 4, and a plurality of process units linearly extended from the common transfer chamber at right angles thereto, each including a process section 2, 2', 2'' and a second transfer device 11, 11', 11'' for linearly transferring objects to and from the process section without rotation thereof.

Re claim 62, nothing precludes the first and second transfer sections from being disposed within the common transfer section.

15. Claims 32, 33, 39-42, 50-52, and 59-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Muka (US 6,079,927).

Muka shows in figures 2-4 a vacuum processing system comprising load port 124 on which a plurality of cassette containers 130 holding a plurality of objects 136 to be processed are arranged in first direction, common transfer chamber 258 having opposite first and second sides, the load port being arranged on the first side, plural process units provided on the second side of the transfer chamber along the first direction, each process unit including a process chamber 120 and a transfer section 262, the process units extending linearly from the transfer chamber in a second direction perpendicular to the first direction, first transfer device 190 in the transfer chamber to transfer objects between the transfer sections and the transfer chamber,

and second transfer devices 230, 232 in the transfer sections to transfer objects between the corresponding process chamber and transfer section of each process unit.

Re claim 42, the transfer section is considered to be "capable of evacuation", as broadly claimed, even though it does not explicitly recite means for evacuating, inasmuch as it is disclosed as being maintained at a class .1 contamination level (col. 8, lines 3-5). Similarly, re claim 50, it is considered to be "changeable between a vacuum state and an atmosphere state", absent any further limitations.

Re claim 59, ports 222, 224 are considered to be "gate valves".

Re claim 60, single buffer mechanism 234 is considered to meet the claim limitations, since the claim does not explicitly require each transfer chamber to have a separate buffer mechanism therein.

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 34, 47, 53, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muka.

Muka shows only a single buffer 234, rather than separate buffers in each transfer section. Muka does note, however, that the buffer could include more than one slot or shelf for objects.



It would have been obvious, therefore, for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Muka with a separate buffer in each transfer section, in place of a single buffer with multiple wafer slots, as this would allow a simpler linear type of robot to be used (since the buffers could be placed in line with the processing units), thus reducing cost as well as saving space.

Re claim 66, it would have been a mere further design expediency to have provided separate transfer sections individually capable of changing between vacuum and atmospheric states, particularly in view of the previous modification, as this would improve throughput by allowing the transfer sections to be individually pressurized to suit optimal processing conditions.

18. Claims 35-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

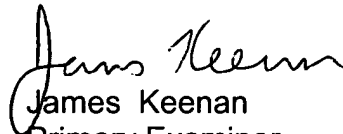
19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 703-308-2559. The examiner can normally be reached on Monday through Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
James Keenan  
Primary Examiner  
Art Unit 3652

jwk  
11/30/04